

Models of Human Motion

Biomechanics studies the influence of internal and external forces on the body in anatomical position

i) Object in motion - particle motion

- a body or object in motion is represented as a single dot representing the object's C of M
- show all external forces on body (gravity & air resistance)
- Projectile Motion (baseball, football)

ii) Object in Contact with environment- stick figure model

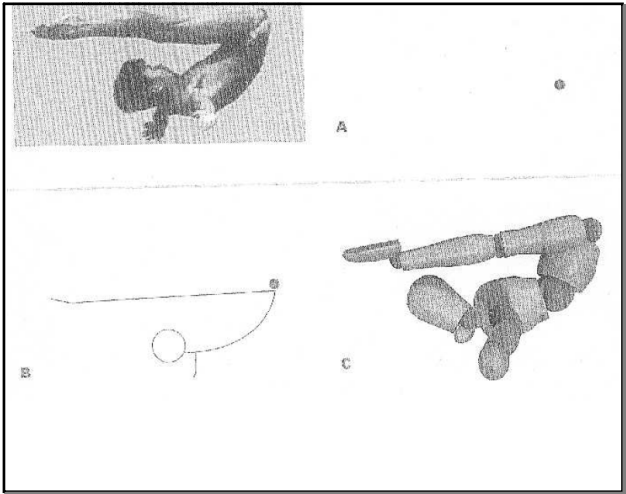
- a body in contact with its environment is represented using a stick figure and rigid lines linked together at joints- body segments
- sticks approximate body proportions
- forces (ground reaction, other objects & gravity)
- Vectors- next step

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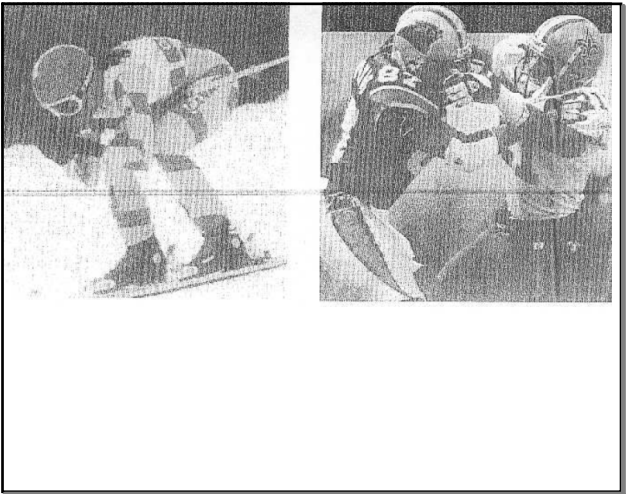
iii) Composite Drawing

- sequence of stick figures
- represents a quick reference of body actions in a skill

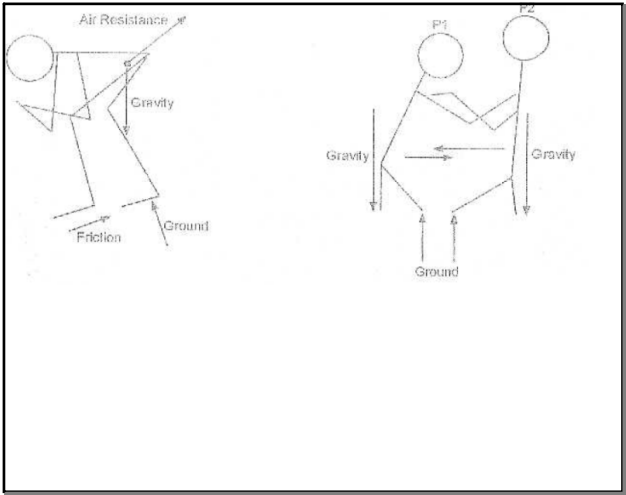
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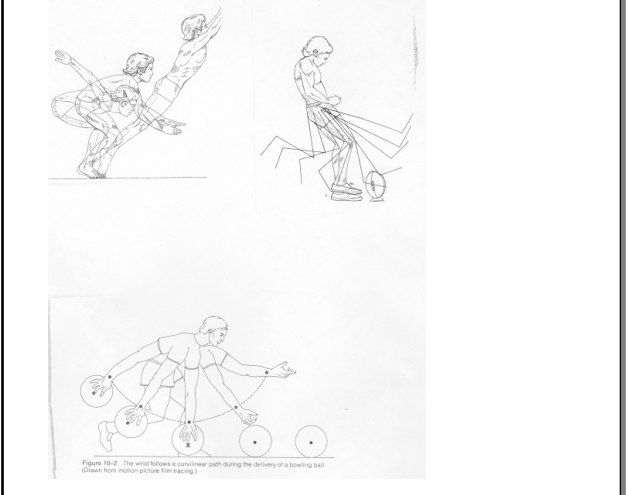
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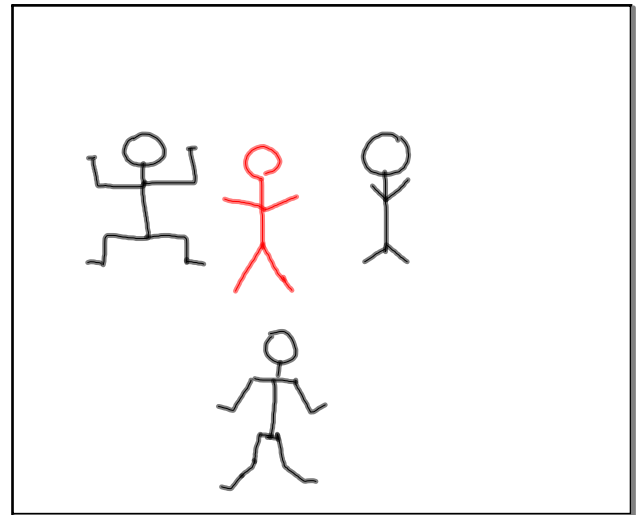
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Assignment

Draw a Stick Figure Diagram for each skill below;

- a) Three Point Stance
- b) Sprinter in the Blocks
- c) Free Throw
- d) Bump in Volleyball
- e) Butterfly Stance for a Goalie

Note -What do each have in Common?



Nov 23-8:41 AM

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